

Listing of the Claims:

Claims 1-17 (canceled).

18. (Previously Presented) A method having a frame structure for transmitting digital data in a radio communication system, the radio communication system including a plurality of central units, each of the central units assigned a plurality of subscribers, the plurality of subscribers including digital voice services, each of the digital voice services being accommodated in a data packet inside the frame structure, the method comprising:

providing multiframes, each of the multiframes being divided into a plurality of containers, each of the containers being selected to be so large that a complete transmission frame, including at least one of an uplink data packet and a downlink data packet, and corresponding signaling data, can be accommodated in a single one of the containers;

monitoring by a first one of the central units at least one complete one of the multiframes;

determining free capacity of frequency channels for further multiframes as a function of the monitoring;

occupying one of the frequency channels that has free capacity;

when there is a collision with a second one of the central units, the second one of the central units using a same time slot and a same frequency channel for a transmission frame as the first central unit, at least one of the first one of the central units and the second one of the central units: i) immediately refraining from occupying the time slot, and ii) attempting occupation again after a time lag.

19. (Previously Presented) A method having a frame structure for transmitting digital data in a radio communication system, the radio communication system including a plurality of central units, each of the central units assigned a plurality of subscribers, the plurality of

subscribers including digital voice services, each of the digital voice services being accommodated in a data packet inside the frame structure, the method comprising:

providing multiframe, each of the multiframe being divided into a plurality of containers, each of the containers being selected to be so large that a complete transmission frame, including at least one of an uplink data packet and a downlink data packet, and corresponding signaling data, can be accommodated in a single one of the containers;

transmitting by a first one of the central units a signal in irregular intervals, the signal announcing that the first one of the central units wants to occupy one of the containers in a following multiframe;

between transmissions by the first one of the central units, determining by the first one of the central units if another one of the central units wants to occupy a same one of the containers that the first one of the central units wants to occupy; and

if another one of the central units wants to occupy the same one of the containers, withdrawing by the first one of the central units and attempting occupation again after a lag time.

20. (Previously Presented) The method as recited in claim 19, wherein the transmitting step includes transmitting the signal in random intervals.

21. (Previously Presented) The method as recited in claim 18, wherein different ones of the central units can occupy a selected time slot, the method further comprising:

providing a collision prevention measure.

22. (Previously Presented) The method as recited in claim 18, further comprising providing a radio cell of the radio communication system, the radio cell being assigned at least one of the containers and at least one of the frequency channels.

23. (Previously Presented) The method as recited in claim 21, wherein a carrier sense multiple access/collision avoidance (CSMA/CA) method is used for the collision prevention measure.

24. (Previously Presented) The method as recited in claim 18, further comprising:
selecting by the at least one of the first central unit and second central unit the lag time in a random manner.

25. (Previously Presented) The method as recited in claim 18, wherein occupying step includes reserving an entire container for a multiframe.

26. (Previously Presented) The method as recited in claim 18, wherein the radio communication system includes sectorized radio cells.

27. (Previously Presented) The method as recited in claim 18, wherein each of the central units only occupies one container per radio sector.

28. (Previously Presented) The method as recited in claim 18, wherein the first central unit occupies more than one of the containers in at least one of the frequency channels.

29. (Previously Presented) The method as recited in claim 18, further comprising:

occupying by the first central unit selected containers on different ones of the frequency channels using several transmission and reception branches, the selected containers coinciding or lying one behind the other.

30. (Previously Presented) The method as recited in claim 18, further comprising:

using an ATM cell as the data packet accommodating digital voice services.

31. (Previously Presented) The method as recited in claim 21, further comprising:

carrying out radio communication by using a centrally controlled protocol, the centrally controlled protocol being one of a MAC protocol, an Internet protocol, an Ethernet protocol and an UMTS protocol.

32. (Previously Presented) The method as recited in claim 21, further comprising using the preventive collision measure to resolve a hidden station problem and a terminal having an occupation attempt transmitting in a transmit break of the first central unit attempting occupation, the hidden station problem including a relatively unnoticeable terminal which lies outside a radio reception range of the first central unit and the first central unit operates outside of a radio reception range of a second central unit.

33. (Previously Presented) The method as recited in claim 18, further comprising selecting a duration at least as long as a multiframe for the monitoring by the first central unit to provide a high probability of an active terminal transmitting once during this duration.